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UNCLAS SECTION 01 OF 03 ROME 005589

SIPDIS

STATE FOR STAS/REYNOLDS AND OES/STC

WHITE HOUSE FOR OSTP/HALL

EUR/ERA FOR WAXMONSKY

DEPT PASS NSF FOR SENIOR ADVISOR FOR NANOTECHNOLOGY/ROCO,
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CHEMISTRY/ELLIS AND OIA/PIEROLLE AND HUDSON

PARIS FOR NSF REP SCHINDEL

E.O. 12958: N/A

TAGS: [TSPL](#) [KSCA](#) [TPHY](#) [KSCA](#) [TPHY](#) [IT](#) [ITSPL](#) [ITSPL](#)
SUBJECT: NATIONAL NANOTECHNOLOGY CLUSTER IN VENETO READY
FOR LAUNCH

1. SUMMARY. ESTCOUNS AND SCI SPECIALIST VISITED THE UNIVERSITY OF PADUA NANOTECHNOLOGY PROJECT, A FRAMEWORK AGREEMENT BETWEEN PUBLIC AND PRIVATE STAKEHOLDERS TO DEVELOP AN INTERNATIONALLY-COMPETITIVE HIGH-TECH CLUSTER IN VENETO (NORTHERN ITALY). THE PROJECT, CO-FUNDED BY THE RESEARCH MINISTRY, LOCAL GOVERNMENTS AND INDUSTRY, IS BASED ON LEADING RESEARCH FACILITIES, HIGH-TECH INDUSTRY AND A GOOD NETWORK OF INVESTORS. THE UNIVERSITY SHOWED GREAT INTEREST IN COOPERATING WITH A US NANOTECHNOLOGY CENTER AND IN PARTICIPATING IN A BILATERAL SCIENTIFIC WORKSHOP IN THE FUTURE. END SUMMARY.

2. ON OCTOBER 30, THE UNIVERSITY OF PADUA BRIEFED ESTCOUNS AND SCI SPECIALIST ABOUT THE NANOTECHNOLOGY CLUSTER PROJECT BY THE UNIVERSITY RECTOR MORANDINI, PROF. RENATO BOSIO, AND SEVERAL CONSULTANTS FROM MCKINSEY. THE IDEA OF A NANOTECH CLUSTER WAS BORN AFTER A JOURNEY IN THE U.S. DURING WHICH PADUA UNIVERSITY PROFESSORS VISITED UNIVERSITY-BASED NANOTECH CENTERS. THE PROJECT WAS DEVELOPED BY MCKINSEY AND A FRAMEWORK AGREEMENT WAS REACHED. THE RESEARCH MINISTRY HAS ALREADY APPROVED CO-FUNDING OF THE PROJECT, AND THE MINISTER IS EXPECTED TO SIGN THE FRAMEWORK AGREEMENT WITHIN
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NOVEMBER 2002. THE GOAL OF THE PROJECT IS TO JUMPSTART A "VIRTUOUS CIRCLE" AMONG DIFFERENT ACTORS, INCLUDING RESEARCH INSTITUTIONS, EXISTING COMPANIES AND START-UPS, IN ORDER TO ESTABLISH VENETO AS A REGION OF EXCELLENCE IN NANOTECHNOLOGIES IN EUROPE. ACCORDING TO THE PRESENTATION, 50 MILLION EURO WILL BE AVAILABLE BY THE END OF 2002 BUT THE CLUSTER BUDGET IS EXPECTED TO DOUBLE IN THE NEXT FIVE YEARS. NOTE: THIS WOULD BE THE SECOND HIGH-TECH CLUSTER FUNDED BY THE RESEARCH MINISTRY; THE FIRST ONE IS THE INFORMATION TECHNOLOGY CLUSTER IN TURIN. END NOTE.

WHY NANOTECH IN VENETO?

3. VENETO HAS BEEN ONE OF THE ENGINES OF ITALIAN INDUSTRIAL DEVELOPMENT FOR THE LAST DECADES, WITH MANY SMALL AND MEDIUM-SIZE COMPANIES FOCUSING IN EXPORTING NICHE TECHNOLOGIES. MOREOVER, THE REGION HAS THE HIGHEST ENTREPRENEURSHIP AND THE LOWEST FAILURE RATES IN THE EU. AMONG ALL THE INDUSTRIAL SECTORS LOCATED IN THE AREA, MORE THAN 50 PCT IS DIRECTLY AFFECTED BY NANOTECHNOLOGIES APPLIED TO MATERIALS. IN ADDITION, MANY COMPANIES ARE ALREADY INVOLVED IN THE PRODUCTION AND UTILIZATION OF NANOCOMPONENTS, OR VERY INTERESTED IN THEIR FUTURE APPLICATIONS. RECENTLY, SOME LOCAL ENTITIES TOGETHER WITH THE UNIVERSITIES OF PADUA AND VENICE, LAUNCHED A PROJECT CALLED "NANO FABRICATION FACILITY", ON THE FOOTPRINT OF WHAT ALREADY HAPPENED IN CERTAIN U.S. UNIVERSITIES (E.G., CORNELL). THE NFF MISSION IS TO HELP LOCAL ACADEMIA AND COMPANIES TO INVESTIGATE AND DEVELOP INDUSTRIAL APPLICATIONS OF NANOTECHNOLOGIES. IN
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ADDITION TO THAT, THE NFF WILL TRAIN UNIVERSITY STUDENTS AND RESEARCHERS AS WELL AS EMPLOYEES OF INTERESTED COMPANIES.

4. SEVERAL RESEARCH ACTIVITIES ARE CURRENTLY BEING CARRIED OUT IN THE AREA, SPANNING NANOTECHNOLOGY FOR MATERIALS, NANO-ELECTRONICS, AND NANOBIOTECHNOLOGY. TWO LOCAL UNIVERSITIES, PADUA AND VENICE, AS WELL AS RESEARCH INSTITUTES, HAVE MORE THAN 500 RESEARCHERS AND PHD'S CURRENTLY INVOLVED IN ACTIVITIES DIRECTLY CONNECTED TO NANOTECHNOLOGY, WITH EXCELLENCE IN THE AREA OF THE PROPERTIES (STRUCTURAL AND FUNCTIONAL) OF MATERIALS. REGARDING APPLICATIONS, NANOPARTICLE COATINGS FOR AUTO-

LUBRICATING SURFACES, FOR GOLD AND SILVER PROTECTION (IMPORTANT TO JEWELRY PRODUCTION), AND VERY THIN LAYER COATINGS FOR LIGHT-ABSORPTION IN GLASS ARE CURRENTLY BEING DEVELOPED, AS WELL AS A LIGHTER AND MORE RESISTANT NANOSTRUCTURED TEXTILE FOR MOTORCYCLE CLOTHING. NOTE: THERE IS A HIGH CONCENTRATION OF METAL AND OF TEXTILE INDUSTRIES IN VENETO, WITH PARTICULAR EMPHASIS ON METAL ALLOYS AND ANTICORROSIVE COATINGS. END NOTE.

ACTORS INVOLVED IN THE PROJECT FOR A HIGH TECH CLUSTER

15. THE VENETO NANOTECH CLUSTER IS STRONGLY SUPPORTED BY

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ACTION OES-00

INFO	LOG-00	NP-00	AMAD-00	CIAE-00	DODE-00	DOEE-00	DOTE-00
	EB-00	EUR-00	OIGO-00	FAAE-00	UTED-00	VC-00	H-01
	TEDE-00	INR-00	L-00	VCE-00	NASA-01	AC-01	NSAE-00
	NSF-01	PM-00	ACE-00	TEST-00	R-00	PMB-00	SAS-00
	/004W						

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P 181320Z NOV 02
FM AMEMBASSY ROME
TO SECSTATE WASHDC PRIORITY 6954
INFO ENVIRONMENT SCIENCE AND TECHNOLOGY COLLECTIVE
AMCONSUL MILAN
AMCONSUL NAPLES
AMCONSUL FLORENCE
WHITE HOUSE WASHDC

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BOTH PRIVATE AND PUBLIC SECTORS. IN DETAIL:

EDUCATIONAL AND RESEARCH ORGANIZATIONS:

THE UNIVERSITY OF PADUA, THE "CA' FOSCARI" UNIVERSITY OF VENICE, THE NATIONAL RESEARCH COUNCIL (CNR), THE NATIONAL INSTITUTE OF NUCLEAR PHYSICS (INFN), THE NATIONAL INSTITUTE FOR THE PHYSICS OF MATTER (INFN), GALILEO SCIENTIFIC AND TECHNOLOGICAL PARK OF PADUA, AND VEGA SCIENTIFIC AND TECHNOLOGICAL PARK OF VENICE.

GOVERNMENT

THE MINISTRY OF EDUCATION, UNIVERSITY AND RESEARCH, AND THE LOCAL GOVERNMENT BRANCHES (THE REGION OF VENETO, PROVINCES OF PADUA AND VENICE, CITIES OF PADUA AND VENICE)

FINANCIAL INSTITUTIONS

FOUNDATION "CASSA DI RISPARMIO DI PADOVA E ROVIGO", AND
FOUNDATION "CASSA DI RISPARMIO DI VENEZIA".

INDUSTRIAL AND BUSINESS ORGANIZATIONS
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INDUSTRIAL FEDERATION OF VENETO, INDUSTRIAL ASSOCIATIONS OF THE PROVINCES OF PADUA AND VENICE, ASSOCIATION OF THE CHAMBERS OF COMMERCE OF VENETO, CHAMBERS OF COMMERCE OF PADUA AND VENICE, AND MAJOR COMPANIES HEADQUARTERED IN VENETO (E.G. BENETTON AND LUXOTTICA).

ACTIVITY TO BE LAUNCHED

16. THE MAIN ACTIVITIES TO BE LAUNCHED BY THE CLUSTER INCLUDE: TALENT ATTRACTION AND TRAINING (ESTABLISHING AN INTERNATIONAL MASTER'S IN NANOTECH, INCREASING NUMBER OF PHD'S PER YEAR, OFFERING TEACHING POSITIONS TO INDUSTRY LEADERS); INCREASE SCIENTIFIC RESEARCH AND INDUSTRIAL TESTING (HIRING INTERNATIONALLY KNOWN RESEARCHERS AND STRENGTHENING EQUIPMENT AND INDUSTRIAL TESTING FACILITIES); PROMOTION OF THE CENTER THROUGH INTERNATIONAL AGREEMENTS; TECHNOLOGY TRANSFER AND ACTIVE SUPPORT OF START-UP COMPANIES.

17. ON NOV. 16, AS A FOLLOW UP OF OUR VISIT, PROF. BOSIO SENT US A LETTER PROPOSING SEVERAL JOINT ACTIVITIES INCLUDING THE ORGANIZATION OF WORKSHOPS TOGETHER WITH U.S. UNIVERSITIES ON FUNCTIONAL OR STRUCTURAL PROPERTIES OF MATERIALS, BILATERAL EXCHANGE OF RESEARCHERS, VISIT TO U.S. NANOTECH RESEARCH LABS, AND PROMOTE BILATERAL INTER-UNIVERSITY AGREEMENTS ON PHD'S PROGRAMS IN PHYSICS, CHEMISTRY, AND SCIENCE OF MATERIALS.

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18. EMBASSY COMMENT: THE UNIVERSITY OF PADUA IS AMONG THE FIRST UNIVERSITIES SERIOUSLY TRYING TO CLOSE THE NOTORIOUS ITALIAN GAP BETWEEN UNIVERSITY RESEARCH AND INDUSTRIAL APPLICATION. A SPIN-OFF AND A PATENT OFFICE HAVE BEEN ESTABLISHED BY THE UNIVERSITY OF PADUA TO ENCOURAGE INDUSTRY TO FUND APPLIED RESEARCH AND RESEARCHERS TO LISTEN TO INDUSTRY NEEDS. THE ACTIVE INDUSTRIAL-ACADEMIC COOPERATION IS SHOWN BY THE NANOTECH APPLICATIONS CURRENTLY STUDIED (SEE PARA. 4 FOR DETAILS). THE NANOTECHNOLOGY PROJECT, BASED ON LEADING RESEARCH FACILITIES, HIGH-TECH INDUSTRY AND AN INFLUENTIAL SPONSORSHIP OF BOTH PUBLIC AND PRIVATE SECTORS, HAS INTERNATIONAL AMBITION AND SEEMS TO BE ON THE RIGHT PATHWAY FOR SUCCESS. THE UNIVERSITY SHOWED GREAT INTEREST IN COOPERATING WITH A U.S. NANOTECHNOLOGY CENTER. EMBASSY WILL PROVIDE INFORMATION ON THE U.S. NANOTECH CENTERS AND THE NSF NANOTECH PROGRAMS, AND WORK WITH NSF, INTERESTED U.S. ACADEMIC INSTITUTIONS AND PADUA UNIVERSITY IN ORGANIZING A SCIENTIFIC WORKSHOP TO EXPLORE COMMON AND COMPLEMENTARY RESEARCH DIRECTIONS.

18. POST IS ALSO AWARE OF THE NATIONAL NANOTECHNOLOGY LABORATORY (NNL) LOCATED IN THE NATIONAL INSTITUTE FOR THE PHYSICS OF MATTER (INFN) UNIT OF LECCE UNIVERSITY (SOUTHERN ITALY) AND CHAIRED BY PROF. ROBERTO CINGOLANI. THE 60-RESEARCHER FACILITY IS FUNDED BY THE EU IV AND V FRAMEWORK

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ACTION OES-00

INFO	LOG-00	NP-00	AID-00	AMAD-00	CIAE-00	CIP-00	COME-00
	DINT-00	DODE-00	DOEE-00	ITCE-00	DOTE-00	EB-00	EUR-00
	FAAE-00	UTED-00	VC-00	H-01	TEDE-00	INR-00	IO-00
	ITC-01	L-00	VCE-00	NASA-01	AC-01	NSAE-00	NSF-01
	PM-00	ACE-00	SP-00	STR-00	TEST-00	EPAE-00	PMB-00
	SAS-00	/005W					

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RESEARCH PROGRAMS, THE INFM, MIUR, CNR, AND INFN. REGARDING
INDUSTRY LINKS, THE U.S. COMPANY AGILENT TECHNOLOGIES IS
SPONSORING 3 YEARS R AND D PROGRAM - AND 5 PHD'S - ON
PHOTONIC DEVICES. THE INITIATIVE IS CALLED "AGILENT
TECHNOLOGIES-UNIVERSITY OF LECCE FUTURES LAB". END COMMENT.

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